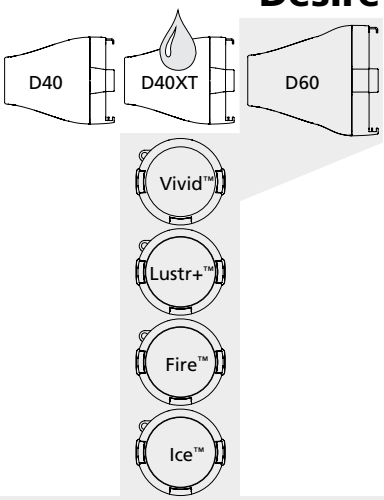
100V 115/120V 230/240V

## Desire® Series




This datasheet covers D60 luminaires as shown.
See other datasheets for other versions.

## GENERAL INFORMATION

The Selador® Desire D60 fixture puts the seven-color x7 system into a high-brightness, 60-emitter, round theatrical washlight. Highly efficient primary lenses and careful color choices make the D60 fixture ideal for stage, studio and anywhere strong color and high-intensity are requirements. The Selador x7 Color System™ produces the widest range of spectrally-balanced saturated and tinted color choices available. D60's rugged die-cast enclosure; quiet, fan-cooled operation; multiple lens options; and advanced user interface make it ideal for multiple applications.

### D60 LED array options

D60 fixtures are based on the x7 Color System that uses seven different LED colors to achieve true, usable broad-spectrum color. The D60 luminaire is available with any one of the following x7 color arrays (not interchangeable) to best suit the intended application:

- D60 Vivid – the x7 Color System array balanced for best all-around use as a color-changing wash fixture
- D60 Lustr+ – optimized array with six colors plus high-intensity white LEDs to create an ideal frontlight wash fixture for full-range color, with an emphasis on lighter colors and white and natural illumination of skin tones
- D60 Ice – uses the cool colors of the x7 System to provide extra-high-brightness color in the blue end of the spectrum
- D60 Fire – uses the warm colors of the x7 System to provide extra-high-brightness color in the red end of the spectrum

## ORDERING INFORMATION

### Selador D60

| MODEL | DESCRIPTION |
|---|---|
| SELD60VI | D60 Vivid |
| SELD60LI | D60 Lustr+ |

Note: D60 luminaires ship with a hanging yoke, a Very Narrow secondary lens and an input lead with connector of choice. See page 2 for connector options. C-clamps are not included.

### Other D60 Versions

| | |
|---|---|
| SELD60FI | D60 Fire |
| SELD60II | D60 Ice |

**SELD60 V I – 0X**

**D60 Model Prefix**

**Color Mix**
V = Vivid 7-color standard wash
L = Lustr+ front light wash variant
F = Fire variant
I = Ice variant

**Usage Rating**
I = IP20 (interior)

**Finish Options**
0 = Black (standard)
1 = White
5 = Silver or other custom color (Contact factory)

**Connector Options**
X = bare end
A = Parallel blade, U-ground (Edison)
B = Two-pin and ground (Stage-Pin)
C = Grounded 20A twistlock

Note – all IP20-rated fixtures ship standard with either a bare-end power lead or on Edison connector-equipped power lead. Other power lead options are shown in the "Power Lead Options" table.

## SPECIFICATIONS

**GENERAL**

- 60-LED color mixing wash fixture
- ETL Listed to UL 1573 – the standard for stage and studio lighting units
- IP20-rated for indoor use
- Power and DMX in/thru connections for easy setup
- User-friendly control interface with multiple modes and fixture settings

**PHYSICAL**

- Rugged die-cast all-metal housing
- Easy access slots for secondary lenses and accessories
- Uses 8-7/8"/225mm lenses and accessories
- Available in black (standard), white or silver (optional) or custom colors (contact factory)
- Hanging yoke standard. Optional yoke/floor stand available

**ELECTRICAL**

- 100VAC to 240VAC 50/60Hz universal power input
- Neutrik power in and thru connections
- Up to nine fixtures (15A max) may be linked via power thru connector (10 fixtures total per circuit) when used with R20 Relay Module or Unison Echo Relay Panel. Consult breaker trip curves when used with other equipment
- Requires power from a non-dim source
- Inrush
  - 120V: 15A (First half-cycle)
  - 240V: 40A (First half-cycle)

**LED***

- 50,000-hour LED life (50,000 hours to 70% intensity)
- 60 Luxeon® Rebel LED emitters

*See additional LED notes on page three

**COLOR**

- Exclusive *x7 Color System*™ seven-color LED arrays
- Beautifully illuminates skin tones and other objects for natural appearance and high color rendering
- Broad spectrum color interacts seamlessly with conventional sources
- Exclusive red-shift option emulates tungsten dimming performance

**OPTICAL**

- Primary field angle of 17˚ and beam angle of 8˚
- Secondary lenses available for multiple beam-spread options
- Each fixture ships with a Verry Narrow lens; additional lenses must be ordered separately
- Refer to accessory charts for lenses available

**CONTROL**

- DMX512 in and thru via five-pin XLR connectors
- Multiple control options including RGB, strobe, and console-free Master/Slave mode
- See DMX Control Table for additional information
- 15-bit virtual dimming engine provides smooth, high-quality theatrical fades and minimizes color-shift during dimming
- RDM functionality for address and setting changes

**THERMAL**

- Ambient operating temperature of -4˚ to 104˚F (-20˚ to 40˚C)
- Active electronic thermal management for droop-free operation
- Low-noise fan cooling
- Fixture is designed for continuous operation up to 104˚F (40˚C) ambient temperature and requires free flow of air around fixture housing

## ADDITIONAL ORDERING INFORMATION

### Power Input Cables

Use information below to order 5' power input leads with factory-fitted connectors

| MODEL | DESCRIPTION |
|---|---|
| DPA-A | 5' PowerCon™ to parallel blade U-ground (Edison) connector |
| DPA-B | 5' PowerCon to 20A two-pin and ground (stage pin) connector |
| DPA-C | 5' PowerCon to grounded 20A twistlock connector |
| DPA-X | 5' PowerCon to bare-end power input lead |

### Power Thru Jumpers

Note: Power thru jumpers connect to fixture's output (thru) connector to provide input to successive fixtures

| MODEL | DESCRIPTION |
|---|---|
| DPJ-5 | 5' PowerCon to PowerCon fixture to fixture jumper |
| DPJ-10 | 10' PowerCon to PowerCon fixture to fixture jumper |

### Fixture Accessories

| MODEL | DESCRIPTION |
|---|---|
| SLD60YUK | Yoke with floor stand attachment |
| 490BD | Barn door (Use only as a flexible top hat to diminish aperture glare. Not for beam shaping) |
| 490CF | Color Frame (use for round and oblong lenses) |
| 490L | Egg Crate Louver |
| 490PTH3 | Top Hat 3" Tube |
| 490PTH6 | Top Hat 6" Tube |
| 490PHH | Half Hat 6" Tube |
| 400CC | C-Clamp (does not ship with fixture) |
| 400SC | Safety Cable (32") |
| DPSJ-25 | 25' PowerCon-to-Edison input power cable with inline switch |

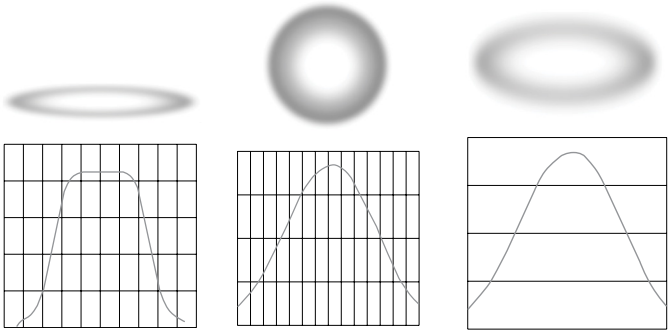
## ADDITIONAL ORDERING INFORMATION

### Secondary Lens Options

| MODEL | DESCRIPTION: The following lenses are cut for D60 fixtures and create round, linear or oblong field patterns as described below. These lenses are not sized for use in Selador® Classic fixtures. | |
|---|---|---|
| **Narrow Linear Field** | Note: This is the same material as Selador Classic lenses | |
| SELLVN-9 | 9" Very Narrow lens | Linear lenses may be combined to create desired field size |
| SELLN-9 | 9" Narrow lens | |
| SELLM-9 | 9" Medium lens | |
| SELLW-9 | 9" Wide lens | |
| SELLEW-9 | 9" Extra Wide lens | |
| **Round Field** | | |
| SELRVN-9 | 9" Very Narrow lens (round field) | |
| SELRN-9 | 9" Narrow lens (round field) | |
| SELRM-9 | 9" Medium lens (round field) | |
| SELRW-9 | 9" Wide lens (round field) | |
| **Oblong Field** | | |
| SELON-9 | 9" Narrow lens (oblong field) | |
| SELOM-9 | 9" Medium lens (oblong field) | |
| SELOW-9 | 9" Wide lens (oblong field) | |

http://www.etcconnect.com/docs/docs_downloads/miscdocs/Desire_vs_PAR_EA_revB.pdf

### Typical Lens Field Profiles



Narrow Linear Round Oblong

### Power Consumption at Full Intensity

| MODEL | VOLTAGE (V) | CURRENT (A) | WATTS |
|---|---|---|---|
| SelD60 | 120 / 240 | 1.35/0.68 | 161 |

## NOTES ABOUT LED LUMINAIRES

All LED sources experience some lessening of light output and some color shift over time. LED output will vary with thermal conditions. Based on the LED manufacturer's B50 L70 specification, a Selador luminaire will achieve ~70% of its initial output after 50,000 hours of typical usage. In individual situations, LEDs will be used for different durations and at different levels. This can eventually lead to minor alterations in color performance, necessitating slight adjustments to presets, cues or programs.

## CRI AND CQS RATINGS

Desire fixtures were evaluated for CRI and CQS performance using measured output spectrum and optimized mix solutions for a best spectral match to black body sources at 3200K and 5600K.

| Fixture | CRI | CQS | Color Fidelity | Duv |
|---|---|---|---|---|
| D60 Vivid at 3200K | 87 | 89 | 89 | 0.000 |
| D60 Vivid at 5600K | 90 | 92 | 92 | 0.000 |
| D60 Lustr+ at 3200K | 86 | 88 | 88 | 0.000 |
| D60 Lustr+ at 5600K | 93 | 92 | 92 | 0.000 |
| D60 Studio HD at 3200K | 89 | 90 | 91 | 0.000 |
| D60 Studio HD at 5600K | 92 | 94 | 94 | 0.000 |
| D60 Studio Daylight at 5600K | 71 | 70 | 63 | 0.001 |
| D60 Studio Tungsten at 3000K | 86 | 86 | 86 | 0.001 |

All D60 luminaire versions provide excellent color rendering to the eye, particularly at higher color temperature settings, such as 5600K. In most cases the Duv is 0.000. A Duv rating of 0.000 indicates that the color mix used is exactly on the black body line, with no green or magenta tint.

LENS INFORMATION

### Desire diffusion angle measurements

| NOMINAL | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | No Lens | Very Narrow | Narrow | Medium | Wide | Extra Wide | Narrow Oval | Medium Oval | Wide Oval |
| | | 25° | 35° | 45° | 75° | N/A | 20° x 40° | 30° x 70° | 35° x 80° |
| **D60** | | | | | | | | | |
| **LUSTR+** | 18 | 22 | 27 | 42 | 69 | 104 | 20 x 37 | 25 x 60 | 30 x 82 |
| **VIVID** | 18 | 22 | 27 | 42 | 69 | 104 | 20 x 37 | 25 x 60 | 30 x 82 |
| **FIRE** | 18 | 23 | 28 | 42 | 69 | 103 | 21 x 38 | 25 x 60 | 30 x 82 |
| **ICE** | 18 | 22 | 28 | 42 | 69 | 99 | 20 x 37 | 25 x 60 | 30 x 82 |
| **STUDIO HD** | 18 | 23 | 28 | 42 | 69 | 104 | 21 x 29 | 25 x 61 | 30 x 82 |
| **STUDIO D** | 22 | 25 | 30 | 43 | 70 | 105 | 24 x 39 | 28 x 62 | 32 x 80 |
| **STUDIO T** | 23 | 25 | 30 | 43 | 70 | 105 | 24 x 39 | 28 x 62 | 32 x 80 |

Values in black refer to old lens descriptions.

## CONTROL OPTIONS

User settings on D60 fixtures allow multiple operational modes and settings for either console operation via DMX protocol or stand-alone operation. The expanded LCD display provides easy navigation to all possible settings and options. Some of the setting options are:

- Multiple DMX choices ranging from a simple RGB profile – which effectively controls all seven LED colors via three channels – to nine-channel 'direct' color and intensity control
- Multiple dimming curve options
- Preset colors and effects for stand-alone (no console required) operation
- White point selection – white light and color behavior based on a specific color temperature white light, i.e. 3200K, 5600K, etc.
- Loss of data behavior options – instant off, hold last look for two minutes, etc.
- Output modes – three output options that offer the user a choice between maximum output and maximum consistency

See the User Manual for a complete explanation of all of the control settings and options for the D60.

### Quick Setups

To assist in managing the numerous control and fixture behavior choices, five combinations of operational settings are available to quickly get started. These settings are specifically created for different situations and are easily accessible at the fixture display. Each setting can then be modified as required to take advantage of all of the possible control features.

| Setting Title | Profile | Description | Typical Features* |
|---|---|---|---|
| General | Direct | Factory Default:<br>For general-purpose use, including interior architectural applications | • Standard dimming curve<br>• Regulated output for color consistency |
| Stage | HSI<br>Plus 7<br>Enabled | Theatrical lighting:<br>Duplicates the color and dimming behavior of tungsten stage lighting fixtures | • Incandescent dimming curve<br>• Regulated output for color consistency<br>• 3200K white point setting |
| XT Arch | HSI | Exterior architectural lighting:<br>Provides a high degree of color consistency in high ambient temperature envionments | • Standard dimming curve<br>• Protected output<br>• 3200 white point setting |
| High Impact | RGB | Event lighting:<br>Enables quickest response, simple RGB control and strobe channel for maximum effect usage | • Quick dimming curve<br>• Boost mode for maximum intensity<br>• 5600K white point setting |
| Studio | Studio | Studio Factory Default:<br>Enables three-parameter control of white light (intensity, white point, and tint) via DMX from a console or console-free fixture display | • Linear dimming curve<br>• Regulated output mode for color consistency |

*See user manual for complete list of features for each Quick Setup

CONTROL OPTIONS

### DMX Input Channel Profiles

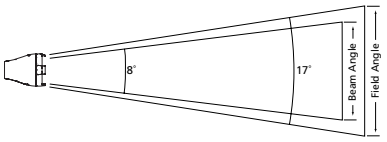
| DMX Profile | DMX Channels | Channel Assignments | Notes |
|---|---|---|---|
| Direct | 10 | 1 – Red<br>2 – Orange (white if Lustr+)<br>3 – Amber<br>4 – Green<br>5 – Cyan<br>6 – Blue<br>7 – Indigo<br>8 – Intensity<br>9 – Strobe<br>10 – Fan Control | Direct control of each individual color with a separate master intensity channel. Color calibration of LEDs is not active in this mode. The ten-channel profile will produce the highest-quality color crossfades. |
| HSI | 6 | 1 – Hue (coarse)<br>2 – Hue (fine)<br>3 – Saturation<br>4 – Intensity<br>5 – Strobe<br>6 – Fan Control | High-resolution hue (two channels), saturation, and intensity control. HSI mode will produce color crossfades around the color space. |
| HSIC | 7 | 1 – Hue (coarse)<br>2 – Hue (fine)<br>3 – Saturation<br>4 – Intensity<br>5 – Strobe<br>6 – Fan Control<br>7 – Color Point (CCT) | High-resolution hue, saturation and intensity control as above, with the addition of a color-point channel to adjust the color temperature of the fixture in both white light and color. Color crossfade performance is the same as HSI. |
| RGB | 6 (Ch. 4 not used) | 1 – Red<br>2 – Green<br>3 – Blue<br>4 – n/a<br>5 – Strobe<br>6 – Fan Control | Effectively addresses all seven colors via three channels of control. RGB profile will produce medium-quality color crossfades |
| Studio | 6 (Ch. 4 not used) | 1 – Intensity<br>2 – Color Point (CCT)<br>3 – Tint<br>4 – n/a<br>5 – Strobe<br>6 – Fan Control | Controls fixture as a white light unit. If no DMX, (console input, for example) is present, fixture can be adjusted for these three parameters on the U/I at the back of the unit. |
| Additional profile options | | | |
| Plus 7 | | Seven additional color-control channels are available in RGB, HSI, and HSIC input profile settings. For example, HSI with 'Plus 7' enabled becomes a 15-channel profile: | |
| | | 1 – Hue (coarse)<br>2 – Hue (fine)<br>3 – Saturation<br>4 – Intensity<br>5 – Strobe<br>6 – Fan Control<br>7 – n/a<br>8 – Plus7 Control on/off<br>9 – Red<br>10 – Orange (white if Lustr+)<br>11 – Amber<br>12 – Green<br>13 – Cyan<br>14 – Blue<br>15 – Indigo | The desired color and intensity are achieved by using the HSI or RGB channels<br><br>Placing channel seven at a value over 51% gives the fixture a 15-channel profile.<br><br>Channels 9-15 represent the native colors of the fixture and allow the operator to adjust individual color channels to fine-tune the color output. |
| Strobe | | Variable strobe control: 0% is no strobe. The fixture output will strobe more rapidly as the strobe-channel value approaches 100%. | |

PHOTOMETRICS

## D60 Vivid

| Mode | Degree | Candela | Field Lumens | Beam Lumens | Lumens Per Watt |
|---|---|---|---|---|---|
| Boost - cold | 17˚ | 170,540 | 3,760 | 1,667 | 28.8 |
| Regulated | 17˚ | 132,451 | 3,050 | 1,305 | 28.3 |

Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76

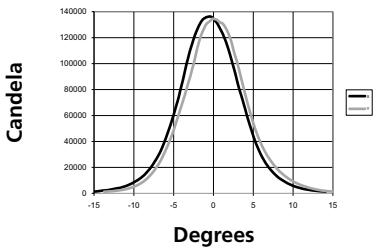



| Throw Distance (d) | 10′ 3m | 15′ 4.6m | 20′ 6.1m | 25′ 7.6m | 402.1′ 122.6m |
|---|---|---|---|---|---|
| Field Diameter | 3.0′ 0.9m | 4.4 1.4m | 5.9′ 1.8m | 7.4′ 2.3m | – |
| Illuminance (fc) | 1,617 | 719 | 404 | 259 | 1 |
| Illuminance (lux) | 17,405 | 7,736 | 4,351 | 2,785 | 10.76 |

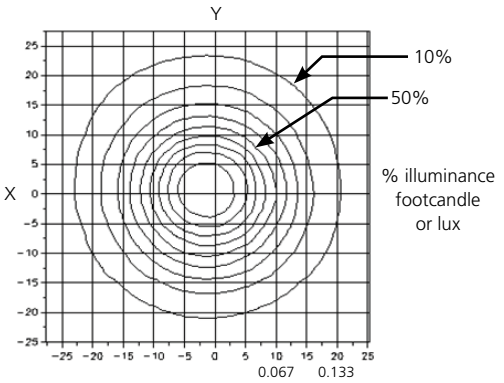
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.295
For beam diameter at any distance, multiply by 0.145

### Cosine Candela Plot



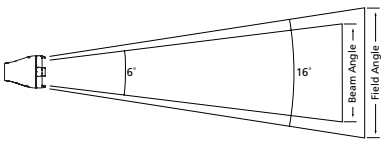

### Iso-Illuminance Diagram
**(Flat Surface Distribution)**




## D60 Lustr+™

| Mode | Degree | Candela | Field Lumens | Beam Lumens | Lumens Per Watt |
|---|---|---|---|---|---|
| Boost - cold | 16˚ | 195,012 | 4,317 | 1,931 | 33.3 |
| Regulated | 16˚ | 180,097 | 3,850 | 1,748 | 32.7 |

Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76

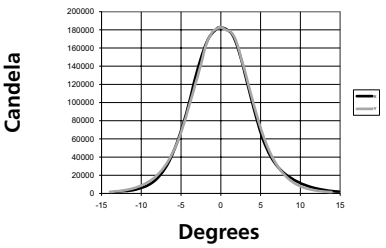



| Throw Distance (d) | 10′ 3m | 15′ 4.6m | 20′ 6.1m | 25′ 7.6m | 427.6′ 130.3m |
|---|---|---|---|---|---|
| Field Diameter | 2.9′ .9m | 4.3′ 1.3m | 5.8′ 1.8m | 7.2′ 2.2m | – |
| Illuminance (fc) | 1,828 | 812 | 457 | 292 | 1 |
| Illuminance (lux) | 19,676 | 8,745 | 4,919 | 3,148 | 10.76 |

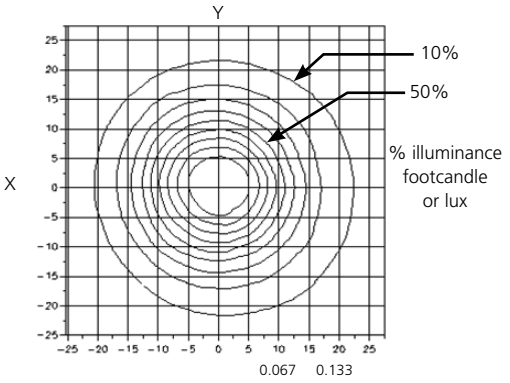
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.288
For beam diameter at any distance, multiply by 0.112

### Cosine Candela Plot




### Iso-Illuminance Diagram
**(Flat Surface Distribution)**

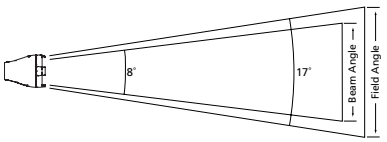


## PHOTOMETRICS

### D60 Fire™

| Mode | Degree | Candela | Field Lumens | Beam Lumens | Lumens Per Watt |
|---|---|---|---|---|---|
| Boost - cold | 17˚ | 177,597 | 4,112 | 1,866 | 33.6 |
| Regulated | 17˚ | 133,760 | 3,075 | 1.399 | 32.0 |

Metric Conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76

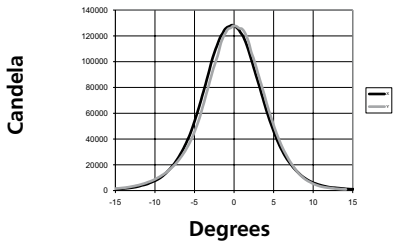



| Throw Distance (d) | 10′ 3m | 15′ 4.6m | 20′ 6.1m | 25′ 7.6m | 412.4′ 125.7m |
|---|---|---|---|---|---|
| Field Diameter | 3.0′ 0.9m | 4.5′ 1.4m | 6.0′ 1.8m | 7.5′ 2.3m | – |
| Illuminance (fc) | 1,701 | 756 | 425 | 272 | 1 |
| Illuminance (lux) | 18,309 | 8,138 | 4,577 | 2,930 | 10.76 |

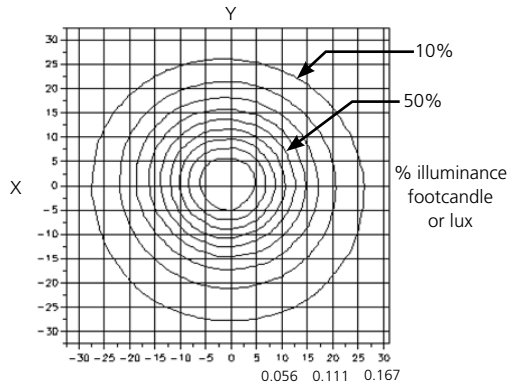
To determine center beam illumination in footcandles at any throw distance, divide candela by the throw distance squared

For field diameter at any distance, multiply distance by 0.301
For beam diameter at any distance, multiply by 0.144

**Cosine Candela Plot**



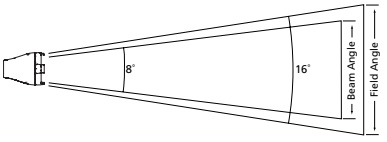

**Iso-Illuminance Diagram**
**(Flat Surface Distribution)**




### D60 Ice™

| Mode | Degree | Candela | Field Lumens | Beam Lumens | Lumens Per Watt |
|---|---|---|---|---|---|
| Boost - cold | 16˚ | 118,965 | 2,526 | 1,243 | 19.5 |
| Regulated | 16˚ | 109,877 | 2,332 | 1,149 | 19.1 |

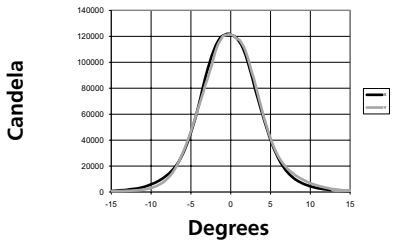
Metric conversions: For meters, multiply feet by 0.3048
For lux, multiply footcandles by 10.76



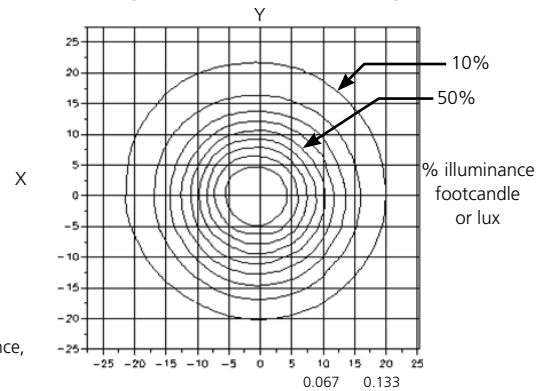

| Throw Distance (d) | 10′ 3m | 15′ 4.6m | 20′ 6.1m | 25′ 7.6m | 358.3′ 109.2m |
|---|---|---|---|---|---|
| Field Diameter | 2.8′ 0.8m | 4.2′ 1.3m | 5.6′ 1.7m | 7.0′ 2.1m | – |
| Illuminance (fc) | 1,284 | 571 | 321 | 205 | 1 |
| Illuminance (lux) | 13,821 | 6,143 | 3,455 | 2,211 | 10.76 |

For field diameter at any distance, multiply distance by 0.278
For beam diameter at any distance, multiply by 0.142

**Cosine Candela Plot**




**Iso-Illuminance Diagram**
**(Flat Surface Distribution)**




*** Throw Distance Multiplier (TDM)

To determine the distance from the center of the beam (Origin) to a certain illuminance level at a particular distance, multiply the desired throw distance by the TDM desired on the Iso-Illuminance diagram.

Throw Distance (TD) x Throw Distance Multiplier (TDM) = Distance from the Origin (DfO) (distance from the center of the beam)

Example: 25 feet (TD) x 0.047 (TDM) = 1.175 feet from center of beam (DfO)

For illumination with any lamp, multiply the candlepower of a beam spread by the multiplying factor (mf) shown for that lamp.

To determine illumination in footcandles or lux at any throw distance, divide candlepower by distance squared.

## D60 ACOUSTICAL INFORMATION

| FIXTURE | SPEED | SOUND PRESSURE LEVEL* |
|---|---|---|
| Background noise level in test chamber | N/A | 18.3 dBA |
| Selador Classic | Single fan speed | 28.1 dBA |
| Desire D60 | 30% | 25.0 dBA |
| | 51% | 37.4 dBA |
| | 60% | 38.6 dBA |
| | 100% | 43.1 dBA |

* Average of readings from four sides of fixture

The fan in all D60 fixtures is thermostatically controlled to run as needed.

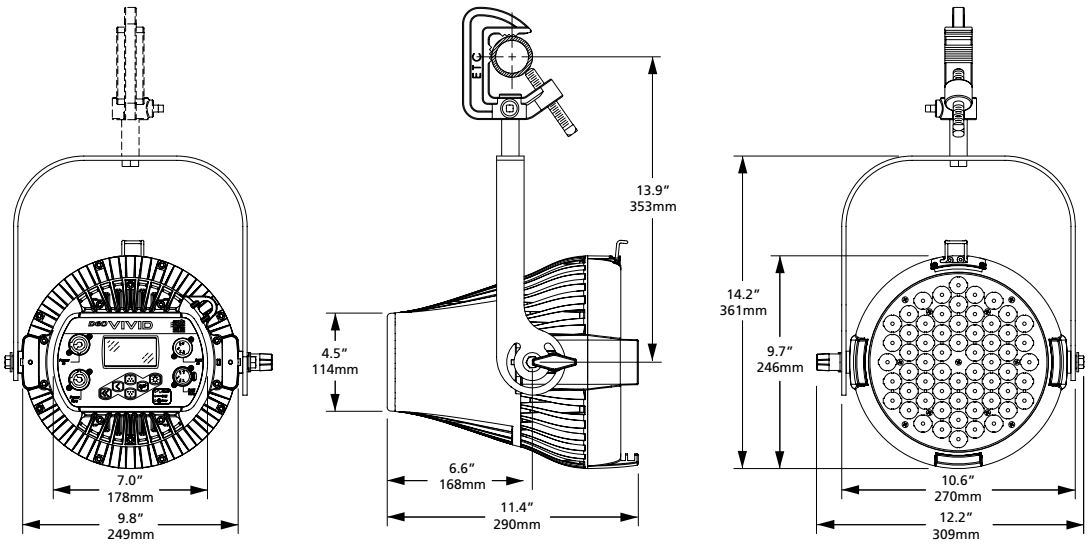
- In regulated mode, fan speed in color-mixing fixtures (Vivid, Lustr+, etc.) will typically not rise above 30% when at full intensity in normal room temperature.
- 60% fan speed may be noted in Studio Daylight and Studio Tungsten fixtures at high intensities at room temperature.

## PHYSICAL

### Selador D60 weights and dimensions

| WEIGHT* | | SHIPPING WEIGHT | |
|---|---|---|---|
| lbs | kgs | lbs | kgs |
| 19.1 | 8.7 | 21.5 | 9.7 |

* Does not include mounting hardware

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